

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-9. (Cancelled)

10. (Currently Amended) A tire manufacturing method for tires in plural sizes chosen from a group of sizes specified in advance, the method comprising:

molding a green tire by assembling tire component members, of the green tire specified in advance, one by one in an assembling sequence specified in advance, wherein the members and the assembling sequence of the tire manufacturing method includes a combination of green tires in different sizes chosen from said group of sizes and the tire component members comprise a carcass band, two bead cores, a belt member and a tread member, the method further comprising:

disposing the carcass band and the two bead cores on a molding drum which has a bead lock portion, the molding drum having a diameter that can be expanded or reduced in a toroidal shape,

locking the bead cores with the bead lock portions,
repeatedly moving the molding drum between stations of a molding system having a plurality of working stations at a predetermined tact time, where the tact time is a sum of an actual working time and an idle time for each of the plurality of working stations,

expanding the diameter of the molding drum, toroidally extending the carcass band between the bead cores, rolling up a side portion of the carcass band around the bead cores outward in a radial direction,

assembling the belt member and the tread member with the bead cores locked to the molding drum and molding the green tire,

reducing the diameter of the molding drum, unlocking the bead cores, and removing the green tire from the molding drum,

determining a correlation of a circumferential phase and an amount of relative displacement or angular displacement between a center of axis of the carcass band and a center of axis of the bead core with a phase and an amplitude of a primary harmonic component of a radial run-out of the green tire;

~~constructing a molding system so that the amount of relative displacement or angular displacement between the center of axis of the carcass band and the center of axis of the bead core can be controlled;~~

~~measuring the radial run-out of a first green tire for one cycle;~~

~~using a result thus measured and the determined correlation to control the amount of relative displacement or angular displacement between the center of axis of the carcass band and the center of axis of the bead core with respect to a subsequent green tire to be molded so as to cancel the primary harmonic component of the radial run-out and reduce the radial run-out of the subsequent green tire,~~

measuring the radial run-out of a first green tire for one cycle and obtaining an inverted waveform in which the primary harmonic component is inverted;

calculating a circumferential phase and an amount of relative displacement or angular displacement between a center of axis of the carcass band and a center of axis of the bead core, which would cause the inverted waveform, by using the correlation determined in the previous step; and

controllably setting a position or an angle of at least either one of the bead core axis centers by using the results of the calculating step in building of a subsequent green tire so as to cancel the primary harmonic component of the radial run-out and reduce the radial run-out of the subsequent green tire,

wherein the foregoing steps are repeated to continuously mold green tires in mixed plural sizes.

11. (Canceled)

12. (Canceled)